

Evaluation of Functional Outcome in Patients with Tibial Plateau Fractures using Minimally Invasive Techniques with or without Calcium Hydroxyapatite Blocks

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Abstract

Background: The purpose of the present study is to evaluate the functional outcome in patients with tibial plateau fractures using minimally invasive techniques with or without calcium hydroxyapatite blocks. **Material and Methods:** 24 patients with displaced tibial plateau fractures (>2mm) were treated using minimally invasive techniques from June 2015 to June 2017. All the patients were assessed clinically for functional outcome of knee using Rasmussen score and radiographically for degree of maximal joint depression using J. F Keating et al criteria. **Results:** The mean follow up was 10.9 month (8-16). At 8 month follow up the mean range of flexion was 127 degrees with no loss of extension. Modified Calcium Hydroxyapatite was used as bone void filler in 14 patients. Quality of reduction in depressed plateau fractures was excellent in 50%, satisfactory in 43% and poor in 7% at 8 months followup. Overall the functional result using Rasmussen's criteria were acceptable in 92% of cases. All the patients in our series showed union with average time for union being 14.7 weeks. **Conclusion:** Minimally invasive surgeries have the advantage in that it allows anatomic reduction, allows early knee mobilization while minimizing the soft tissue dissection thus preserving the vascularity of fracture bone. Modified calcium hydroxyapatite is a useful alternative to autologous bone graft for the fractures of tibial plateau.